$PM_{2.5}$ Technical Forum on Particulate Matter Monitoring
Executive Summary

On July 18, 1997, the United States Environmental Protection Agency (U.S. EPA) promulgated a revision to the National Ambient Air Quality Standard (NAAQS) for particulate matter. As part of the rulemaking, new air monitoring requirements for fine particulate matter ($PM_{2.5}$) were established. New monitors have been developed and new particulate monitoring networks will be instituted beginning in 1998. Additionally, the U.S. EPA indicated an interest to continue research into the specific harmful elements that comprise airborne particulate matter. This coincides with ongoing activities by the Air Resources Board (ARB). A major component of these efforts includes investigations into new particulate measurement techniques.

To address the future monitoring needs for particulate matter, the ARB held a monitoring forum in Sacramento on March 16 and 17, 1998. The forum provided a venue to discuss network plans and future needs for $PM_{2.5}$ monitoring in California. The forum covered a range of topics including a draft monitoring network plan that outlined the deployment of fine particulate samplers in 1998 and 1999 to implement the U.S. EPA's $PM_{2.5}$ regulations. Also of importance were a series of key panel discussions to look toward monitoring needed over the next four to six years.

Representatives from a number of air districts offered their perspectives on the development of the $PM_{2.5}$ network plan. ARB received no substantive comments on the plan at this meeting from other participants; although the participants will have more time to form their comments. Many of the participants had useful suggestions and identified priorities for further $PM_{2.5}$ monitoring to support planning efforts, health studies, and public notification prior to high pollution days. There was a strong consensus that more frequent monitoring and more detailed chemical speciation of particulate matter would provide valuable information to support these efforts. However, the group also acknowledged that there are significant technological and resource hurdles to overcome in order to develop more advanced monitoring equipment.

Forum topics included: ongoing particulate matter health studies; PM effects on health and visibility; evaluation results of the Federal Reference Method (FRM) monitors; agency funding; concerns with PM_{10} continuous monitors; air monitoring community resource concerns with everyday monitoring for $PM_{2.5}$; health community concerns and why everyday monitoring is needed; guidelines for reducing the number of PM_{10} sites; the need to still monitor for PM_{10} from a health point of view; what needs to be investigated in clinical studies; the need for archiving samples for future speciation concerns; what speciated compounds should be identified; the need for good $PM_{2.5}$ continuous monitors versus everyday sampling with non-continuous monitors; requests for more frequent sampling during peak seasons and less during non-peak seasons; the need for episode notifications and how to accomplish this; modeler's needs for vertical profile measurements in addition to surface measurements; plans for obtaining emissions data that are needed for modeling; how to have air quality data available for everyone to see and use; research needs for new technologies; the need for "gold standards" for measuring particles; the need for "super sites" and special studies; issues related to defining a "super site"; methods to assess $PM_{2.5}$ transport; the need for $PM_{2.5}$ data aloft and how to obtain that data; and what approaches are available and needed to model annual average violations.

On the pages following are the forum highlights and corresponding questions and answers. They follow the same order as noted in the $PM_{2.5}$ Technical Forum on Particulate Matter Monitoring Agenda.